

WHAT IS CLAIMED IS:

1 1. For use with a scalable video decoder capable of decoding
2 an incoming scalable video bit stream and generating a baseband
3 video signal, an apparatus for controlling a processing load of
4 said scalable video decoder comprising:

5 an analyzer circuit capable of measuring at least one
6 characteristic of said incoming scalable video bit stream and
7 generating at least one video parameter associated with said at
8 least one characteristic; and

9 a processor load controller capable of receiving said at
10 least one video parameter and, in response thereto, controlling a
11 level of decoding of said incoming scalable video bit stream
12 performed by said scalable video decoder.

1 2. The apparatus as set forth in Claim 1 wherein said at
2 least one video parameter indicates a level of motion of frames in
3 said incoming scalable video bit stream.

1 3. The apparatus as set forth in Claim 1 wherein said
2 wherein said at least one video parameter indicates a level of
3 detail of frames in said incoming scalable video bit stream.

1 4. The apparatus as set forth in Claim 1 wherein said
2 processor load controller is further capable of receiving a frame
3 type parameter associated with a first frame in said incoming
4 scalable video bit stream.

5. The apparatus as set forth in Claim 4 wherein said frame
type parameter comprises at least one of an I-frame parameter, a B-
frame parameter, and a P-frame parameter.

6. The apparatus as set forth in Claim 5 wherein said
processor load controller is further capable of receiving a source
type parameter associated with said first frame in said incoming
scalable video bit stream.

7. The apparatus as set forth in Claim 6 wherein said source
type parameter indicates whether said incoming scalable video bit
stream is one of a video bit stream and a film bit stream.

1 8. The apparatus as set forth in Claim 1 wherein said
2 processor load controller generates at least one scale factor
3 capable of controlling a level of decoding performed by said
4 scalable video decoder.

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1 9. A video processing system comprising:
2 a buffer capable of receiving and storing an incoming
3 scalable video bit stream;
4 a scalable video decoder capable of decoding an incoming
5 scalable video bit stream and generating a baseband video signal,
6 said scalable video decoder comprising:
7 an apparatus for controlling a processing load of
8 said scalable video decoder comprising:
9 an analyzer circuit capable of measuring at least
10 one characteristic of said incoming scalable video bit stream
11 and generating at least one video parameter associated with
12 said at least one characteristic; and
13 a processor load controller capable of receiving
14 said at least one video parameter and, in response thereto,
15 controlling a level of decoding of said incoming scalable
16 video bit stream performed by said scalable video decoder; and
17 a display coupled to said scalable video decoder capable
18 of displaying said baseband video signal.

1 10. The video processing system as set forth in Claim 9
2 wherein said at least one video parameter indicates a level of
3 motion of frames in said incoming scalable video bit stream.

1 11. The video processing system as set forth in Claim 9
2 wherein said wherein said at least one video parameter indicates a
3 level of detail of frames in said incoming scalable video bit
4 stream.

1 12. The video processing system as set forth in Claim 9
2 wherein said processor load controller is further capable of
3 receiving a frame type parameter associated with a first frame in
4 said incoming scalable video bit stream.

1 13. The video processing system as set forth in Claim 12
2 wherein said frame type parameter comprises at least one of an I-
3 frame parameter, a B-frame parameter, and a P-frame parameter.

1 14. The video processing system as set forth in Claim 13
2 wherein said processor load controller is further capable of
3 receiving a source type parameter associated with said first frame
4 in said incoming scalable video bit stream.

1 15. The video processing system as set forth in Claim 14
2 wherein said source type parameter indicates whether said incoming
3 scalable video bit stream is one of a video bit stream and a film
4 bit stream

16. The video processing system as set forth in Claim 9
wherein said processor load controller generates at least one scale
factor capable of controlling a level of decoding performed by said
scalable video decoder.

1 17. For use with a scalable video decoder capable of decoding
2 an incoming scalable video bit stream and generating a baseband
3 video signal, a method for controlling a processing load of the
4 scalable video decoder comprising the steps of:

5 measuring at least one characteristic of the incoming
6 scalable video bit stream;

7 generating at least one video parameter associated with
8 the at least one characteristic;

9 10 in response to a value of the at least one video
11 parameter controlling a level of decoding of the incoming scalable
12 video bit stream performed by the scalable video decoder.

13 14 15 16 17 18. The method as set forth in Claim 17 wherein the at least
19 one video parameter indicates a level of motion of frames in the
20 incoming scalable video bit stream.

21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 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1 20. The method as set forth in Claim 17 further comprising
2 the steps of:

3 determining a frame type parameter associated with a
4 first frame in the incoming scalable video bit stream;

5 in response to a value of the at least one frame type
6 parameter, controlling a level of decoding of the incoming scalable
7 video bit stream performed by the scalable video decoder.

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21. The method as set forth in Claim 20 wherein the frame type parameter comprises at least one of an I-frame parameter, a B-frame parameter, and a P-frame parameter.